REMARKS

Applicant respectfully request reconsideration of this application in view of the above amendments and the following remarks.

Claims Status

Claim 15, 20, 30 and 36 has been amended. Claims 1-14, 17, 19, 21-29, 32, 34, 38, 40, 42-43, 46-47 and 49-50 have been cancelled, without prejudice. New claims 51-59 have been added. Therefore, claims 15-16, 18, 20, 30-31, 33, 35-37, 39, 41, 44-45, 48 and 51-59 remain pending for examination.

35 U.S.C. § 103 Rejection

Claims 15-16, 20-21, 30-31, 35-37 and 41-50 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Viswanath, et al., U.S. Patent No. 7,206,827 ("*Viswanath*") in view of Jung, et al., U.S. Patent No. 6,308,208 ("*Jung*") and further in view of Gorman, et al., U.S. Patent No. 6,795,791 ("*Gorman*") and Rivierre, et al., U.S. Patent No. 7,539,743 ("*Rivierre*").

Claim 15, as amended, recited:

A multi-service monitoring system comprising:
computer server systems having a cluster of application servers communicatively coupled on a computer network to serve software applications over the computer network to a plurality of computer client systems, wherein each computer server system including an application server having:
an administration service to generate runtime management beans ("MBeans"), wherein each runtime MBean is associated with one or more resources such that <u>each runtime MBean serves as an intermediary between its one or more associated resources and a corresponding monitor MBean of monitor MBeans that seeks monitoring data relating to the one or more resources, each runtime MBean collecting monitoring data relating to the one or more associated resources and reporting the monitoring data to the corresponding monitor MBean,</u> wherein *each monitor MBean to*

actively receive the monitoring data from a corresponding runtime
MBean via active instrumentation, wherein the active
instrumentation is performed upon occurrence of a specified event
associated with the one or more resources; and

a monitor service in communication with the administration service, the
monitor service to generate the monitor MBeans, each monitor
MBean being directly mapped to a corresponding runtime MBean
and indirectly mapped to a resource associated with the
corresponding runtime MBean, and each monitor MBean having a
resource identifier to identify its corresponding runtime MBean.

(emphasis added)

Applicants respectfully disagree with the Examiner's characterization of the

references and the pending claims. For example, the Examiner assert that *Gorman*

discloses a direct mapping between runtime MBeans and monitor MBeans and an indirect

mapping between monitor MBeans and resources. (*see Advisory Action*, 06/30/10, page

2). Applicants respectfully disagree. *Gorman* does not disclose runtime MBeans;

instead, *the cited reference* discloses a *conventional MBean server* 106 that is *directly*

connected to a monitor 122 and a JMX resource 108. (*see Gorman*, Figure 1; *see also* col.

3, lines 23-35). *Gorman*'s *MBean server* does not represent *runtime MBeans* where **each**

monitor MBean is *directly mapped* to a corresponding runtime MBean and *indirectly*

mapped to a resource associated with the corresponding runtime MBean and **each**

runtime MBean is associated with one or more resources such that **each** runtime MBean

serves **as an intermediary** between its one or more associated resources and a

corresponding monitor MBean that seeks monitoring data relating to the one or more

resources as recited by claim 1.

Regarding other cited references, *Viswanath* discloses "one or more components

of the administration framework from meta-information describing persistently stored

configuration information." (*Viswanath*, abstract). *Viswanath* further discloses "the

meta-information may be accessed by generator mechanism to generate beans. *Beans*

may provide a bean representation of the configuration data of the backend persistent

store." (*Viswanath*, col. 10, ln. 31-35; emphasis added). *Viswanath* further discloses "*generate a bean for each corresponding element in meta-information. Bean may represent every element in the meta-information file.*" (*Viswanath*, col. 10, ln. 51-54; emphasis added).

Viswanath merely mentions "*beans*" and "*bean representation*", but it does not teach or reasonably suggest employing two types of MBeans, such as runtime MBeans and monitor MBeans to perform resource monitoring as recited by claim 15. As the Examiner acknowledges, *Viswanath* does not explicitly disclose "each runtime MBean collecting monitoring data for its one or more resources and reporting the monitoring data to a corresponding monitor MBean . . . each monitor [M]Bean having a resource identifier to identify its corresponding runtime MBean" (*Office Action*, mailed 10/27/09, pg. 3). However, the Examiner relies on *Jung* for the alleged support.

Jung relates to an "*observer-observed relationship*" in which a cell refers to a *database server* (such as a computer system) that is construed as a "master resource" to "'observe' other cells or it may be observed by another cell" (*Jung*, col. 2, ln. 5-25; emphasis added). Stated differently, using *Jung*'s technique, *a master computer system observes servant computers system* and, in some cases, *even the master computer system is observed by another computer system.* Note that *Jung does not mention or employ any type of beans* and, consequently, does not teach or reasonably suggest "each <u>*runtime*</u> <u>*MBean collecting monitoring data*</u> <u>for its one or more associated resources and</u> <u>*reporting*</u> <u>*the monitoring data to a corresponding monitor MBean*</u>" and further "<u>each monitor</u> <u>MBean being</u> *<u>directly mapped</u>* <u>to a corresponding runtime MBean and</u> *<u>indirectly mapped</u>* <u>to a resource associated with the corresponding runtime MBean</u>, and <u>each monitor</u> <u>MBean having a</u> *<u>resource identifier</u>* <u>to identify its corresponding runtime MBean</u>" as recited by claim 15 (emphasis added).

Viswanath merely *refers to beans*, but does not teach or reasonably suggest employing <u>MBeans</u> (specifically, <u>runtime and monitor MBeans</u>) for monitoring tasks as recited by claim 15, while *Jung* neither employs nor anticipates employing any type of beans. Hence, *Jung* does not make up for the deficiencies of *Viswanath*.

The Examiner acknowledges certain deficiencies of *Viswanath* and *Jung*, such as that they do not "explicitly disclose the Beans are MBeans, wherein each monitor MBean being directly mapped to a corresponding runtime MBean and indirectly mapped to a resource associated with the corresponding MBean and its associated runtime MBean", but relies on *Gorman* for the alleged support (*Office Action*, mailed 04/27/10, pg. 4; *see Advisory Action*, mailed 06/30/10, page 2). Applicants respectfully disagree with the Examiner's characterization of *Gorman*.

As aforementioned, *Gorman* discloses a *conventional MBean server* 106 on the agent side 102. As shown in *Figure 1* of *Gorman*, monitor 122, query 124, and JMX resource 108 are all **directly connected** to MBean server 106 (*see Gorman*, Figure 1, col. 3, ln. 23-29). *Gorman*'s **direct connection** of monitor, query, and JMX resource with their MBean server is **contrary** to each *monitor MBean* being <u>*directly mapped*</u> to a corresponding *runtime MBean* and <u>*indirectly mapped*</u> to a *resource* associated with the corresponding runtime MBean as recited by claim 15. The Examiner further relies on *Rivierre* for the alleged support, but *Rivierre* discloses "a Java application represented by an MBean M0 locally exposing information from an MBeanServer furnished with an RMI connector. The system 121 is for example an application hosted by a J2EE application server (for example Websphere from IBM or Weblogic from BEA) and represented locally by an MBean M1 exposing information from an MEJB (Management Enterprise Java Bean)". (*Rivierre*, col. 1, lines 26-63). The cited references, neither individually nor when combined, teach or reasonably suggest <u>each runtime MBean is</u>

associated with one or more resources such that each runtime MBean serves *as an intermediary* between its one or more associated resources and a corresponding monitor MBean seeking monitoring data relating to the one or more resources as recited by claim 15.

Furthermore, *Viswanath, Jung, Gorman*, and *Rivierre*, neither individually nor when combined any combination teach or reasonably suggest "*each monitor MBean to actively receive the monitoring data from a corresponding runtime MBean via active instrumentation, wherein the active instrumentation is performed upon occurrence of a specified event associated with the one or more resources*" as cited by the amended claim 15. (emphasis added). Accordingly, for at least reasons set forth above, Applicants respectfully request the withdrawal of the rejection of claim 15 and their dependent claims.

Claims 30 and 36 contain limitations similar to those of claim 15. Accordingly, for at least reasons set forth above with reference to claim 15, Applicants respectfully request the withdrawal of the rejection of claims 30 and 36 and their dependent claims

Claims 18, 33 and 39 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Viswanath, Jung, Gorman* and *Rivierre* as applied to claim 15, 30 and 36, respectively above, in view of Ismael, et al., U.S. Patent No. 6,061,721 ("*Ismael*").

Claims 18, 33 and 39 depend from one of claims 15, 30 and 36 and thus include all the limitations of the corresponding base claim. Accordingly, for at least the reasons set forth above with respect to claim 15, Applicants respectfully request the withdrawal of the rejection of claims 18, 33 and 39.

Claims 25-26 are rejected under 35 U.S.C. §103(a) as being unpatentable over

Viswanath, Jung, Gorman, and Rivierre as applied to claim 15 above, in view of Haller, et al., U.S. Patent Publication No. 2004/0244001 ("*Haller*").

Claims 25-26 depend from claim 15 and thus include all the limitations of its corresponding base claim. Accordingly, for at least the reasons set forth above with respect to claim 15, Applicants respectfully request the withdrawal of the rejection of claims 25-26.

New Claims

New claims 51-59 depend from one of independent claims 15, 30 and 36 and thus include all the limitations of their corresponding base claim. Accordingly, for at least the reasons set forth above with respect to claim 15, Applicants respectfully submit that claims 51-59 are allowable over the cited references.

Furthermore, Applicants respectfully submit that new claims 51-59 are allowable over the cited references on their own merit and independent of their base independent claims 15, 30 and 36. For instance, as with "*active instrumentation*" of claim 15, *Viswanath, Jung, Gorman*, and *Rivierre*, neither individually nor when combined in any combination teach or reasonably suggest "*passive instrumentation*" of claims 51, 54 and 57 which further recite "the monitor MBeans to further passively receive the monitoring data from the runtime MBeans via passive instrumentation, the passive instrumentation including runtime MBeans *automatically providing* the monitoring data to the monitor MBeans". (claims 51, 54 and 57; emphasis added).

Similarly, *Viswanath, Jung, Gorman*, and *Rivierre*, neither individually nor when combined in any combination, teach or reasonably suggest the "*notification service*" of claims 52, 55 and 58 which further recite the *notification service* including "one or more of a *notification broadcaster* to facilitate generation of the notifications, a *notification listener* to facilitate reception of the notifications, and a *notification filter* to filter the

notifications on behalf of the notification listener" (claims 52, 55 and 58; emphasis added).

Finally, *Viswanath*, *Jung*, *Gorman*, and *Rivierre*, neither individually nor when combined in any combination, teach or reasonably suggest "*monitor updates*" of claims 53, 56 and 59. Claim 53 recites "monitoring data comprises *monitor updates* including one or more of a *string monitor* to monitor text as string values, an *integer monitor* to monitor an integer value, a *table monitor* to monitor a table containing a header and a contents, a *state monitor* to assign colors to the string values, an *availability monitor* to monitor a Boolean value indicating whether a resource is available, a *frequency monitor* to compute a frequency according to reported number of events given at specified times, a *quality rate monitor* to compute an average quality rate or an actual quality rate according to a reported number of total tries and successful tries, a *pool monitor* to monitor a pool characterized by configurable values or runtime values, and a *cache monitor* to monitor a cache characterized by a configurable maximum cache size or a number of current used objects". (claim 53; emphasis added; *see* claims 56 and 59).

Accordingly, new claims 51-59 are allowable over the cited references.

Conclusion

In light of the foregoing, reconsideration and allowance of the claims is hereby earnestly requested.

Invitation for a Telephone Interview

The Examiner is requested to call the undersigned at (303) 740-1980 if there remains any issue with allowance of the case.

Request for an Extension of Time

Applicants respectfully petition for an extension of time to respond to the outstanding Office Action pursuant to 37 C.F.R. § 1.136(a) should one be necessary. Please charge our Deposit Account No. 02-2666 to cover the necessary fee under 37 C.F.R. § 1.17(a) for such an extension.

Charge our Deposit Account

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

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